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The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte ROBERT A. HEIBERGER

Appeal No. 2002-0704
Application No. 09/237,687

12-21-02
12-20-02
12-14-02
12-7-02
11-21-02

HEARD: October 10, 2002

Before STAAB, NASE, and BAHR, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection (Paper No. 10, mailed January 11, 2001) of claims 1 to 5, 7, 9, 33 and 34. Claim 35 has been allowed and claims 6, 8 and 10 to 32 have been canceled.

We AFFIRM-IN-PART and enter a new rejection pursuant to 37 CFR § 1.196(b).

BACKGROUND

The appellant's invention relates generally to fluid containers and, more particularly, to closure mechanisms for drinking bottles such as sport and water bottles. Specifically, the invention relates to pop-up type valve assemblies for fluid container closure mechanisms (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Porter et al. (Porter)	3,201,013	Aug. 17, 1965
Perlmutter	5,145,094	Sept. 8, 1992

Claims 2, 4, 5 and 34 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the appellant regards as the invention.

Claims 1 to 5, 7, 9 and 33 stand rejected under 35 U.S.C. § 103 as being unpatentable over Porter in view of Perlmutter.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (Paper No. 18, mailed December 4, 2001) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 17, filed September 24, 2001) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

The indefiniteness rejection

We sustain the rejection of claims 2, 4 and 5 under 35 U.S.C. § 112, second paragraph, but not the rejection of claim 34.

In the final rejection (pp. 2-3) and the answer (pp. 3-4), the examiner set forth his rationale as to why claims 2, 4, 5 and 34 were indefinite.

The appellant has not specifically contested this rejection in the brief with respect to claims 2, 4 and 5. Accordingly, we summarily sustain the rejection of claims 2, 4 and 5 under 35 U.S.C. § 112, second paragraph.

With regard to claim 34, the examiner stated that it was uncertain what the "disposed thereon" limitation in claim 34 (i.e., and is disposed thereon for limiting the longitudinal movement of said valve body within said sleeve between said open and closed positions) is in reference to (i.e., what this limitation is referring back to). Specifically, the examiner is uncertain (answer, p. 6) if the "disposed thereon" limitation in claim 34 refers back to the "at least one stop member," the "chamfered surface," or the "wedge."

The appellant argues (brief, pp. 14-15) that the language of claim 34 is definite since the "disposed thereon" limitation in claim 34 is sufficiently clear that it refers only to the "stop member."

The second paragraph of 35 U.S.C. § 112 requires claims to set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977). In making this determination, the definiteness of the language employed in the claims must be

analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. Id.

The examiner's focus during examination of claims for compliance with the requirement for definiteness of 35 U.S.C. § 112, second paragraph, is whether the claims meet the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available. Some latitude in the manner of expression and the aptness of terms is permitted even though the claim language is not as precise as the examiner might desire. If the scope of the invention sought to be patented can be determined from the language of the claims with a reasonable degree of certainty, a rejection of the claims under 35 U.S.C. § 112, second paragraph, is inappropriate.

With this as background, we analyze the specific clause in claim 34 found objectable by the examiner. The full text of this clause is as follows with the "disposed thereon" limitation highlighted in bold:

> a valve body disposed for longitudinal movement within said sleeve between an open position to permit flow of product through said passage from said container and a closed position to prevent flow of product through said passage, said valve body includes at least one stop member that projects radially outwardly having a chamfered surface in the form of a wedge that is adapted for engagement against one said guide member **and is disposed thereon for limiting the**

> **longitudinal movement of said valve body within said sleeve between said open and closed positions**, said stop member being seated within said slot to also restrict the rotational movement of said valve body within said sleeve, said valve body being radially deformable for selective removability from said sleeve passage in response to selective rotational force imposed on said valve body in its open position to assist in deforming said valve body radially inwardly.

The specification (pp. 9-11) teaches that the valve body 30 is best shown in Figures 6 and 7 and includes a cylindrical shell or sleeve 44 having an outer surface 46, an inner surface 48 defining a central cavity 49, an open first end 50, and a substantially closed second end 52. The closed second end 52 is preferably in the form of a valve cap 54 which has an aperture 56 formed centrally therein. At least one and preferably a pair of stop members 66, 68 are disposed on the outer surface 46 of the valve sleeve 44 diametrically opposite each other and proximate the open end 50 thereof. The stop members 66, 68 are sized and shaped for respective placement within slots 36 formed in the cap member 14 for longitudinal movement therewithin. As depicted in Figure 11, each stop member, such as representative stop member 66, is in the form of an ear 70 projecting radially outwardly from the outer surface 46 of the valve sleeve 44. Each ear 70 preferably includes an outer radial edge 72 which defines an upper shoulder 74 and a lower shoulder 76 with lower shoulder 76 formed at an angle with respect to surface 46 (Figure 6). Each ear 70 further includes a pair of end shoulders 77 and 78 which provide torsional resistance to rotational movement of the valve body 30. A chamfered surface 80 extends from one end shoulder 78 to the radial

outer edge 72. As a result of the chamfered surface 80, the end shoulder 78 is substantially smaller than the end shoulder 77 and forms in combination with the chamfered surface 80 a wedge 82 for use in removing the valve body 30 from the sleeve 18. The valve body 30 is positioned within sleeve 18 of the cap member 14 such that the valve sleeve 44 is disposed within cylindrical space 42 of the cap member 14 with the stop members 66, 68 being seated and interlocked within their respective slots 36. As can be clearly seen in Figures 5 and 6, the slots 36 define the limit of movement of the valve body 30 within the sleeve 18 of the cap member 14 between its open and closed positions.

In our view, the "disposed thereon" limitation in claim 34 is definite as required by the second paragraph of 35 U.S.C. § 112 when analyzed in light of the above-noted teachings of the application's disclosure. Specifically, it is our opinion that one possessing ordinary skill in this art would have understood the "disposed thereon" limitation in claim 34 to be referring to the "at least one stop member," not the "chamfered surface" or the "wedge." Accordingly, the decision of the examiner to reject claim 34 under 35 U.S.C. § 112, second paragraph, is reversed.

The obviousness rejection

We sustain the rejection of claims 1 to 5, 7, 9 and 33 under 35 U.S.C. § 103.

In accordance with 37 CFR § 1.192(c)(7), we have selected claim 1 as the representative claim from the appellant's grouping of claims 1 to 5, 7, 9 and 33 to decide the appeal on this rejection under 35 U.S.C. § 103. See page 4 of the appellant's brief.

Claim 1 reads as follows:

> A closure for a container that is adapted to hold a product for dispensing, comprising:
> (a) a cap member mountable to a container, said cap member having a product outlet passage and a sleeve defining said outlet passage that includes a guide member and a longitudinal slot along said guide member; and
> (b) a valve body disposed for longitudinal movement within said sleeve between an open position to permit flow of product through said passage from said container and a closed position to prevent flow of product through said passage, said valve body having an ear projecting radially outwardly , said ear received in said slot during use and removable out of said slot to allow removal of said valve body from said sleeve.

The teachings of Porter

Porter's relates to an improvement in a cap for containers containing a liquid or semi-viscous liquid and more particularly to a cap which provides a closure and a dispensing element, the cap being mounted on a neck of the container. As shown in Figures 1-7, cap A includes a base 10 having an internally threaded cylindrical wall portion 12 adapted to be screwed on the threaded neck of a container. The base 10 is preferably molded of a plastic material and also includes a circular top portion 14 which

has extending therethrough an axial circular opening 16 communicating with the inside of the wall portion 12 and which is bisected by a support bar 18 extending across a diameter of the opening 16. Extending upwardly from the top edge of the support bar 18 and axially of the opening 16 is an elongated closure pin 22. Extending outwardly of the top portion 14 and in axial alignment with the circular opening 16 is a hollow cylindrical neck portion 24 having an annular stop rib 26. The annular stop rib 26 has an inner edge portion 28 normal to the axis of the neck portion 24 and an angularly disposed annular edge portion 30.

A movable stopper 32 is reciprocable longitudinally of the neck 24 from an inner, valve closed position (Figure 2) to an outer valve open position (Figure 3). The stopper 32 includes a hollow cylindrical body portion 34, the outer diameter of which is slightly less than the inner diameter of the neck 24. Formed on the outer lower edge of the body portion 34 of the stopper 32 is an annular stop flange 36, the upper edge 38 of which provides a shoulder. The outer diameter of the flange 36 is substantially that of the inside diameter of the neck 24 whereby sliding sealing contact is made between the flanges 36 and the inner surface of the neck. The stopper 32 includes a top 42 having an outlet hole 48 which receives the closure pin 22 when the stopper is moved into the closed position.

The stopper 32 is operatively mounted on the neck 24 by inserting the cylindrical body portion 34 of the stopper into the neck 24 and due to its resiliency or the resiliency of the neck 24[1] the same can be forced upon the neck whereby the stop flange 36 is passed downwardly and over the annular stop rib 26 to a position below or inwardly of the rib 26. The engagement of stop flange 36 with stop rib 26 limits the outward movement of the stopper on the neck.

To open the cap, the stopper 32 is pulled outwardly and slidably on the neck thereby withdrawing the pin 22 from the outlet hole 48 (Figure 3), whereby material can be caused to flow past the support bar 18, the pin 22 and out the hole 48. The outward movement of the stopper 32 upon the neck 24 is limited by the stop flange 36 contacting the annular stop rib 26. The inward movement of the stopper to a closed position is limited by the upper edge of the neck 24 contacting the bottom of an annular channel 46 formed in the stopper 32.

The teachings of Perlmutter

Perlmutter's invention relates to a liquid dispensing closure especially useful on plastic squeeze bottles. Figures 1-5 show a liquid dispensing closure for use on the

[1] Porter teaches (column 1, lines 18-24) that one of the members is molded of a relatively rigid plastic material and the other member of an elastic plastic whereby the elastic member may be deformed slightly to allow the two members to be joined together to complete the cap, the more rigid member lending materially to the stability of the cap.

neck portion of a plastic squeeze bottle. The dispensing closure includes a one-piece plastic cap member 10 having a central axis 8. The cap member includes a radial wall 12 adapted to form an end wall of the bottle, an annular skirt 14 concentric with axis 8 and adapted for threaded connection about the externally threaded neck portion of the squeeze bottle, and a tubular sleeve 16 extending axially from wall 12 to form a mouth opening 17. Two internal arms 19 extend from wall 12 parallel to axis 8 to support a radial disk 21 within the space circumscribed by skirt 14. A short cylindrical plug 23 extends axially from disk 21 to form a cylindrical valve surface 24. An elongated cylindrical post 25 extends axially from plug 23 through mouth opening 17.

The movable component of Perlmutter's device comprises a unitary plastic closure body 26 which has an elongated tubular side wall 27 terminating at one end in an external flanged end wall 29. A cylindrical dispenser opening 31 extends through end wall 29 in axial alignment with post 25. Elongated side wall 27 has an annular detent rib 33 configurated and sized selectively to extend into either of two annular grooves 35 and 37 defined in the inner surface of stationary sleeve 16. Side wall 27 also has an annular sealer bead 39 adapted slidably to engage the inner surface of sleeve 16. As best seen in Figure 5, each groove 35, 37 is of rectangular cross section. The associated detent rib 33 has an essentially semi-circular cross-section, whereby

the rib has two-point engagement with the sleeve 16 inner surface. The radial depth dimension of each annular groove 35 or 37 is measurably greater than the radial projection of detent rib 33, thus to ensure that the rib engages the groove edges only at the desired lines of contact. The rib can seal against the sleeve 16 groove at two axially spaced locations. Figure 5 also shows sealer bead 39 as being of triangular cross section, with an apex area facing the inner surface of sleeve 16. When bead 39 is in slidable engagement with the sleeve 16 surface (Figure 1 condition), the apex area of the bead may be slightly deformed by the contact pressure, thus to provide a thick line sealing engagement with the sleeve surface. The outer diameter of tubular wall 27 is measurably less than the inner diameter of sleeve 16, whereby there is clearance and a frictionless connection between the tubular wall and sleeve, except for the presence of rib 33 and bead 39.

Figure 4 shows the components in a fully closed condition. End area 40 of tubular side wall 27 sealably encircles plug surface 24, while post 25 has a sealing fit in dispenser opening 31. Detent rib 33 has a sealed fit within groove 37. The diameter of opening 31 may be slightly smaller than the diameter of post 25, such that the hole surface can tightly grip the post for an enhanced sealing action. Figure 2 shows the components in a second closed position wherein body 26 is pulled outwardly to a

position in which the post still has a sealed fit in the dispenser opening 31, and detent rib 33 has a sealed fit within groove 35.

Figure 1 shows the closure body 26 in an open position wherein it is disengaged from post 25. Two outwardly radiating flanges 41 on wall 27 limit the motion of closure body 26. As shown in Figure 3, flanges 41 extend within the circumferential open spaces between arms 19. When closure body 26 is pulled to the Figure 1 position, flanges 41 engage wall 12, thereby limiting the motion of the closure body 26. In the Figure 1 position, bead 39 has a sealing engagement with the inner surface of sleeve 16. Movement of the closure body 26 between the Figure 1 and Figure 2 positions is easily accomplished because there is no frictional resistance between tubular side wall 27 and the inner surface of sleeve 16.

As shown in Figures 2 and 3, arms 19 are located on a diametrical line extending through central axis 8 so that the circumferential spaces between the arms serve as passages for unrestricted liquid flow into the space within tubular wall 27 in the Figure 1 position or the Figure 2 position.

Ascertainment of the difference(s) between the prior art and claim 1

After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

Based on our analysis and review of Porter and claim 1, it is our opinion that the differences are (1) the cap member including a longitudinal slot along the guide member; and (2) the valve body having an ear projecting radially outwardly which is received in the slot during use and removable out of the slot to allow removal of the valve body from the sleeve of the cap member.

Based on our analysis and review of Perlmutter and claim 1, it is our opinion that there is no difference. The only possible distinction between Perlmutter and claim 1 is the limitation that the radially outwardly projecting ear of the valve body is removable out of the slot to allow removal of the valve body from the sleeve of the cap member. It is our view that this limitation is inherently met by Perlmutter. As disclosed, Perlmutter's plastic closure body 26 (i.e., the valve body) and plastic cap member 10 have sufficient elasticity/flexibility so that (1) the plastic closure body can be mounted to the plastic cap member by inserting flanges 41 of the closure body within mouth opening 17 of the cap member and then pushing the closure body downwardly in the sleeve 16 of the cap

member until flanges 41 obtain the position shown in Figure 1; and (2) detent rib 33 of the closure body is movable into and out of grooves 35 and 37 of the cap member to the positions shown in Figures 1, 2 and 4. In view of this elasticity/flexibility of the closure body and cap member, the clearance between the tubular wall 27 of the closure member and the sleeve 16 of the cap member and the accessibility of the flanges 41 of the closure member from within the space circumscribed by skirt 14 of the cap member (see Figure 1), we conclude that the flanges 41 of the closure member are removable (i.e., have the capability of being removed) out of the slots defined by the arms 19 of the cap member thus allowing removal of the closure body from sleeve 16 and the cap member 10. In that regard, it is our determination that the space circumscribed by skirt 14 of the cap member as shown in Figure 1 would inherently permit a user to insert a tool to press the flanges 41 of the closure member together permitting the user to grab the end wall 29 of the closure member and remove the closure member 26 from the cap member 10. Thus, we do not agree with the appellant's position (brief, pp. 11-12) that Perlmutter's closure member 26 is not removable from the cap member 10.[2]

For the reasons set forth above, we have concluded that Perlmutter teaches all the limitations of claim 1. A disclosure that anticipates under 35 U.S.C. § 102 also

[2] Attorney's argument in a brief cannot take the place of evidence. In re Pearson, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974).

renders the claim unpatentable under 35 U.S.C. § 103, for "anticipation is the epitome of obviousness." Jones v. Hardy, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984). See also In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982); In re Pearson, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974).

For the reasons set forth above, the decision of the examiner to reject claim 1 under 35 U.S.C. § 103 is affirmed. In accordance with 37 CFR § 1.192(c)(7) and the appellant's grouping of claims 1 to 5, 7, 9 and 33, claims 2 to 5, 7, 9 and 33 fall with claim 1. Thus, it follows that the decision of the examiner to reject claims 2 to 5, 7, 9 and 33 under 35 U.S.C. § 103 is also affirmed.

Inasmuch as the basic thrust of our affirmance of the 35 U.S.C. § 103 rejection of claims 1 to 5, 7, 9 and 33 differs from the rationale advanced by the examiner for the rejection, we hereby designate the affirmance to be a new ground of rejection pursuant to 37 CFR § 1.196(b) to allow the appellant a fair opportunity to react thereto (see In re Kronig, 539 F.2d 1300, 1302-03, 190 USPQ 425, 426-27 (CCPA 1976)).

CONCLUSION

To summarize, the decision of the examiner to reject claims 2, 4 and 5 under 35 U.S.C. § 112, second paragraph, is affirmed; the decision of the examiner to reject claim 34 under 35 U.S.C. § 112, second paragraph, is reversed; and the decision of the examiner to reject claims 1 to 5, 7, 9 and 33 under 35 U.S.C. § 103 is affirmed with this affirmance being designated a new ground of rejection pursuant to 37 CFR § 1.196(b).

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b). 37 CFR § 1.196(b) provides, "[a] new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 CFR § 1.197(b) provides:

> (b) Appellant may file a single request for rehearing within two months from the date of the original decision . . . .

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options

with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

> (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .
>
> (2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should the appellant elect to prosecute further before the Primary Examiner pursuant to 37 CFR § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART; 37 CFR § 1.196(b)

LAWRENCE J. STAAB
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

JENNIFER D. BAHR
Administrative Patent Judge

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